Standard Indicators
SS 5.4.4

Speedy Shoes

Purpose

Students will explain how education and training, specialization, and investment in capital resources increases productivity.

Materials

For the teacher: Shoes for Everyone by Barbara Mitchell, chalk, chalkboard
For the students: copy of the Black Line Master (BLM) *Increasing Productivity*, pencil, paper

Activity

A. Pre-Activity Discussion

1. Ask students to say what they think of when they think of *productivity*.
2. Discuss students' ideas with them, prompting them to provide examples.
3. Say aloud the definition of *productivity* (the amount of goods and services produced in a period of time divided by the productive resources used) as you write it on the chalkboard.
4. Tell students that you are going to read them a book about Jan Matzeliger, who increased the productivity of the shoe manufacturing industry.
5. Instruct students to listen for things that led to an increase in productivity in the shoe manufacturing industry.
6. Read *Shoes for Everyone* aloud to the class.

B. Factors Affecting Productivity

1. Ask students to name factors from the book that led to the increased productivity of the shoe manufacturing industry.
2. Guide students to understand whether the factors they named actually led to increased productivity.
3. Write on the chalkboard the words "Education," "Training," "Specialization," and "Investment in capital resources," and clarify these terms for students.
4. Explain to students that they will be focusing on how the factors listed on the board increased productivity as you read *Shoes for Everyone* to them again.
5. Pass out copies of the BLM *Increasing Productivity*.
6. Instruct students to read their BLMs and to ask any questions that they have.
7. Tell students that they will be completing their BLMs after you reread the book and direct them to take notes as you read.

Technology Literacy Standards

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X = This Technology Literacy Standard is addressed in this lesson.

☐ = This Technology Literacy Standard is not addressed in this lesson.

C. Increasing Productivity

1. Reread *Shoes for Everyone* aloud to students and provide time for note-taking at the end of each chapter.
2. When you finish reading the book aloud, instruct students to complete their BLMs *Increasing Productivity*.
3. Circulate as students work.
4. Assist students by providing memory prompts about the book and by helping them clarify their explanations.
5. When all of the students have finished their BLMs, select students to share their responses.
6. Encourage students to share alternative examples and explanations for each question.

Questions for Review

Basic Concepts and Processes

As the students share responses from their BLMs, ask them:

- If you wanted to increase the productivity of newspaper production, what type of education and training would be useful to you?
  - Explain how you would apply that education and training towards increasing the productivity of newspaper production.
  - Explain how specialization and increased productivity are related.
  - Explain why investment in capital resources is often necessary to increase productivity.

Name_____

Increasing Productivity

Directions: Answer each question, using complete sentences.

1) Give an example of training that Jan received and explain how it eventually led to an increase in the productivity of shoe manufacturing.

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2) Tell what kind of education Jan received and explain how it helped him reach his goal of increasing the productivity of shoe manufacturing.

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3) Tell why Jan moved to Lynn, Massachusetts and explain how the specialized industry there increased productivity.

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4) Explain the importance of Jan's investment in his drawing instruments.

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5) When George W. Brown and Sidney W. Winslow invested money in the capital resources necessary for Jan's final model, how did this change the productivity of the shoe manufacturing industry?

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6) What was the productivity difference between hand lasters and machine lasters?

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Increasing Productivity

Teacher Directions

Pass out the BLMs *Increasing Productivity*. Instruct students to read their BLMs and to ask any questions that they have. Tell students that they will be completing their BLMs after you reread the book and direct them to take notes as you read.

Reread *Shoes for Everyone* aloud to students and provide time for note-taking at the end of each chapter. When you finish reading the book aloud, instruct students to complete their BLMs *Increasing Productivity*. Circulate as students work. Assist students by providing memory prompts about the book and by helping them clarify their explanations.

When all of the students have finished their BLMs, select students to share their responses. Encourage students to share alternative examples and explanations for each question.

Answer Key

Students' answers will vary. Sample answers are listed below.

1) Jan received training by working as an apprentice for his father and for the shoemaker in Philadelphia. Working as an apprentice gave Jan the opportunity to learn the shoe-making process and to recognize needs for improvement; he later used this experience to increase productivity of the industry.

2) Jan took English classes that helped him communicate his new ideas to factory managers and other businessmen. Jan also read books on machines that helped provided him with the knowledge to create his laster model.

3) Jan moved to Lynn, Massachusetts, because it was the shoe manufacturing center of North America. Focusing on only shoes allowed the manufacturers to increase productivity.

4) Jan's drawing instruments enabled him to create sketches of his ideas, which he turned into a model.

5) Brown's and Winslow's investment allowed Jan to build a model that could be used in a factory. The model was then duplicated and used by other shoe manufacturers. The machine lasters had a higher level of productivity than the hand lasters did.

6) Hand lasters made about 50 pairs of shoes in 10 hours, while Jan's machine laster made around 700 pairs in the same length of time.